

REMARKS

In the Office Action dated June 19, 2006, the Examiner objected to Figures 7-14 and 18, provisionally rejected claims 1 and 2 under an obviousness type double patenting rejection based on co-pending application 10/801,242, rejected claims 1, 2, 5, 7, 8, 13, 16-20, and 26-27 under 35 USC 102(b) as anticipated by Cliff in US Patent 5,689,195, and rejected claims 4 and 56 under 35 USC 103 as obvious in view of Cliff. The Examiner also indicated that claims 9-12, 14-15, and 21 as being dependent upon a rejected base claim, but allowable if re-written in independent form. Claim 1 has been amended. Claims 1, 2 and 4-27 remain at issue.

The Drawings

The applicants have revised Figures 7-14 and 18 to address the Examiner's objections.

The Double Patenting Rejection

The claims of the present invention are patentably distinct from claims of the present application. For example, claim 3 of the 10/801,242 application recites, among other elements, logic elements with a dedicated adder and an initialization circuit connected to a carry chain to initialize the carry chain. None of these claimed elements are included in the claims of the present application. Likewise, claims 1 and 2 of the present application include elements that are not found in claims 3 and 4 of the 10/801,242 application, such as the condition that one or more of the logic elements in the second series are not in the first series. For the above reasons, the applicants submit that the double patenting rejection is improper and should be withdrawn.

The Art Rejection

For the record, the Applicants have made several minor amendments to better clarify the present invention as claimed. These amendments were not made to avoid the cited art.

The Examiner has rejected certain claims as anticipated by Cliff. The Applicants strongly disagree. Cliff does not anticipate the present invention as claimed for several reasons.

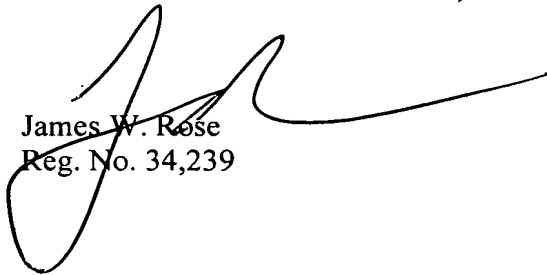
1. Figure 11 of Cliff is directed to propagating a carry signal (54) between one programmable logic region (20) to another programmable logic region (20). See column 20, lines 54-56 of Cliff. Each logic region (20) includes a plurality of logic modules (30). See Figure 1 and column 5, lines 34-35 of Cliff. The “logic block” and “logic elements” of the claimed invention are therefore analogous to a logic region (20) and the logic modules (30) of Cliff respectively. The claims of the present invention are directed to routing a carry signal through either a first path connecting a first series of logic elements in an array block and a second path connecting a second series of logic elements in the same logic block. In contrast, the Cliff reference teaches the routing of a carry signal between different logic regions (i.e., different logic blocks, 20a, 20b, 20c, etc), as opposed to two series of logic modules (30) within a logic block (20).

2. Certain claims of the present invention clearly recite a multiplexer having a first input and a second input. When the first input is selected, a carry signal is propagated through the first series of logic elements to the output of the multiplexer. When the second input is selected, the carry signal is propagated through the second series of logic elements to the output of the same multiplexer. With either alternative, the carry signal propagates through either the first series of logic elements or second series of logic elements within the same logic array block. In contrast, the multiplexers 750 of Cliff receive one input from the corresponding logic block (e.g., 20b) and the second input from the previous logic block (e.g., 20a).

For at least the reasons cited above, Cliff does not anticipate the claims of the present application. All the claims are therefore patentable.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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